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November 6, 1997

DOCKET FILE COPY ORIGINAL

Mr. William F. Caton
Secretary
Federal Communications Commission
Washington, D.C. 20554

Dear Mr. Caton,

Enclosed please find an original and 9 copies, in accordance with 47 CFR 1.419(b), of our comments on ET Docket No. 97-214. There is a copy for each Commissioner.

Thank you for your consideration of our comments on this proposed rule making.

Sincerely,

The Center for Public Broadcasting
James Madison University

William D. Fawcett
Director of Engineering

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*The Center For Public Broadcasting
James Madison University*

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**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Amendment of Part 2 of the)
Commission's Rules to Allocate the) ET Docket No. 97-214
455-456 MHz, and 459-460 MHz bands)
to the Mobile-Satellite Service)
)

COMMENT ON PROPOSED RULE MAKING

Comment Date: November 6, 1997

By: The Center for Public Broadcasting
James Madison University, MSC 6803
821 S. Main Street
Harrisonburg, Virginia 22801

INTRODUCTION

By this action, the Commission proposes to amend Part 2 of the Commission's Rules to allocate the 455-456 MHz band to the Mobile Satellite Service (Earth-to-space) ("MSS uplinks") on a primary basis for non-voice, non-geostationary mobile satellite services ("NVNG MSS"). This action proposes to implement domestically the 455-456 Mhz band NVNG MSS allocation adopted at the 1995 World Radiocommunication Conference ("WRC-95") at the request of the Commission.

The use of the term "primary" is misleading, as the proposed operation in the 455-456 MHz band is subject to international footnote S5.286A, which subjects MSS operations in the 455-456 MHz band to coordination under Resolution 46 of the ITU regulations, and footnotes S5.286B and C, which states that MSS operations in this band shall not cause harmful interference to, or claim protection from, stations of the fixed or mobile services and shall not constrain the development and use of the fixed and mobile services.

It is our contention that the proposed allocation will cause significant damage to the already strained Part 74 operations in this band.

DISCUSSION

The Commission asks: "...we also request comment on whether a primary allocation with technical sharing requirements would be sufficient to protect incumbent operations." To which we reply with an unequivocal "No". The nature of the MSS service is such that equipment could be installed in a multitude of vehicles (i.e. tractor-trailers) with unskilled operators away from their home base. It is unlikely that an appropriate response to a malfunction could be made. Because of the transient nature of the service (short duration and mobile), it is unlikely that any interfering signals could ever be located, or if they could, it is unlikely that anyone will take responsible action concerning it. Certainly, the Commission's inability to deal with illegal operations in the 27 MHz band ("CB" radio) should be a warning to all who believe that a service targeted at such transient operators can be responsibly managed.

Recently we observed the installation of a 900 MHz band GPS base station in this area that ignored the requirement for coordination with the National Radio Astronomy Observatory ("Quiet Zone"). Out-of-town licensees are seldom responsive to locally critical situations. Broadcasters in the RPU service, on the other hand, have an outstanding record of informal frequency coordination; they have maintained order in a potentially chaotic situation.

The Commission has stated that "there are more than 25,000 Part 74 auxiliary broadcast transmitters authorized to use the 455-456 MHz band throughout the United States". While we concur with the Commission finding that "many auxiliary broadcast remote pickup channels in the 455-456 MHz band tend to be used only intermittently" we do not arrive at the same conclusion, namely that this intermittent usage will allow allocation sharing.

The Commission contends that "brief message duration and geographic separation may be able to protect broadcast auxiliary use". In a perfect world, yes. We are not convinced that the mobile receiver which seeks for a quiet channel will be able to fully evaluate the conditions at the receive-end of a long-haul RPU transmission. If it cannot, the intermittent, occasional data-bursts may interfere with what is supposed to be a "broadcast quality" transmission. The quality requirements for such a system are significantly higher than any two-way radio system requiring simple voice communication.

Furthermore, we do not comprehend the meaning of "geographical separation" in the context of our local RPU situation, which is undoubtedly duplicated in many areas of the country. Interstate I-81, which bisects our local market, has truck traffic approaching 10,000 vehicles daily. Even with very low failure rates, there is opportunity for several malfunctioning units to come through the area on a daily basis, with many making extended stays at several of the local truck stops.

ADDITIONAL PROBLEMS

The concept of intermittent usage of the RPU services demands a closer look. What proposed mechanisms exist to provide for a complete shutdown of the MSS uplinks during times of disaster to insure that the then heavily used RPU services are not interfered with? 74.403(b)(1) provides that "Communications during an emergency or pending emergency directly related to the safety of life and property" would receive priority on the affected frequencies. The Commission noted in Report and Order 94-288 concerning the EAS that RPU frequencies may be used to link local governments with broadcasters. It appears that the demands for reliable, uninterfered communications in the RPU band are increasing, not decreasing.

Large scale events, such as the Atlanta Olympics, also place heavy demands on these RPU frequencies. It is likely that each of the channels available in Atlanta at that time were occupied almost continuously during the duration of that event. Note that extensive frequency coordination was accomplished; if there had been an emergency those channels would have been cleared for emergency traffic as per *the rules*.

CONCLUSION

We take this opportunity to remind the Commission that the proposed use of the 455-456 MHz band is not required by WRC-95, in fact it was included in WRC-95 at the insistence of the Commission. The use of these frequencies was permitted only on an "effectively secondary" basis. The Commission states that "the signal integrity of broadcast programming material must be maintained and that Little LEO operations will not be permitted to cause harmful interference to such auxiliary broadcast signals", but has not demonstrated any plan that reasonably indicates that this will indeed be the case.

While the proposed use of short-burst transmissions on open channels may appear technically feasible, such a system has not been tested. If this is a viable solution, than the MSS industry should fund and test such a system to see if it indeed will work. The Commission should authorize such testing with Special Temporary Authorizations, and all testing should be coordinated to insure that no interference does occur.

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Of greater concern is the future potential for interference. Should this service "take off" in the manner of cellular and PCS, then it is conceivable that even with advanced frequency sharing techniques interference may occur. That being the case, the mobile transmitters must be remotely addressable to allow the entire system to be globally removed from the RPU frequencies once and for all. The Commission, and broadcasters, would not be backed into a corner by an industry that says that technology exists to accomplish this incredible feat. The burden must be placed on the MSS industry to develop remotely addressable frequency and transmission authorization to insure that the situation does not become unresolvable in the near future.

The best solution would be to eliminate the 455 MHz RPU band from use by these MSS services. If indeed the equipment is capable of frequency sharing, let that service do it in one or more of the bands currently allocated for such service. The fact that additional frequencies are requested makes the promise of "non-interference" ring hollow.

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